shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." (PCT Rule 13.2).

The Examiner has characterized the invention listed as Groups I-IV as only sharing the technical feature of the nucleic acid of Group I and stated that this does not constitute a special technical feature as defined in PCT Rule 13.2 because the prior art teaches the technical feature of group I, citing WO9964616. Applicants respectfully but strenuously disagree.

WO9964616 does not teach the claimed elongase genes, but rather teaches desaturase genes. The common feature of the invention is the novel elongase genes which elongate unsaturated fatty acids as substrate of the enzyme reaction by at least two carbon atoms.

WO9964616 defines a desaturase as an enzyme which introduces a double bond between two specific carbons of a fatty acid molecule. The contribution of Applicants' invention over the prior art is the identification, cloning and expression of novel elongase genes. For example, as recited in the specification, "[t]he cloning and expression of elongases which elongate unsaturated fatty acids as substrate of the enzyme reaction by at least two C atoms has hitherto been described neither for yeasts nor for plants." (Specification page 3, lines 9-12). The desaturase enzymes, described in WO9964616, after reacting add double bonds not carbon atoms to fatty acid molecules.

Therefore the relevant "single general inventive concept" of the present invention as claimed as required under PCT Rule 13 is the use of novel elongase enzymes. Since the prior art cited by the Examiner teaches desaturases, an entirely different enzyme, this reference is inapplicable as a basis for questioning unity of invention.

Furthermore, the protein mentioned in Group II is encoded by the nucleic acid sequence of Group I. The protein is the catalyst of the process described in Group III and used for the production of polyunsaturated fatty acids (PUFAs). The products of the process are the PUFAs, which are part of Group IV. Therefore Groups I-IV share the same special technical feature and are thus so linked as to form a general inventive concept pursuant to PCT Rule 13.

Restriction To Only Claims Reciting One Species Of Transformed Organisms Is Inappropriate Where The Transformed Organisms Share The Same Special Technical Feature

The Examiner has further required the Applicants to elect a single species of transformed organism. The Examiner stated that the species listed (i.e. microorganisms, nonhuman animal and plant) do not relate to a single general inventive step because the species lack the same or corresponding special technical features because "each belongs to distinctive species of distinct function, utility and properties." Applicants strongly disagree with this requirement and request reconsideration and withdrawal.

As noted, PCT Rule 13.2 refers to "those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." The claimed organism and each species thereof comprises the special technical feature described above, the novel elongase genes. The reason given of "distinct function, utility and properties" does not comport with the PCT rules.

The International Examiner Found Unity of Invention

Furthermore, the International Examination Authority, as shown in the International Preliminary Examination Report, has not found a lack of unity of invention for the present invention when applying PCT Rules 13.1 and 13.2, suggesting unity of all groups.

Additionally, Applicants believe that there is no undue burden on the Examiner to search and examine all groups. As previously noted, this is a 371 application from a PCT application, and all the groups were searched by the International Search Authority and the International Examination Authority. A search directed to elongase genes would overlap with a search of organisms containing these genes and thus there is no undue burden if considered together.

Applicants respectfully submit that the restriction requirement should be withdrawn even under U.S. restriction practice. The inventions are not independent and distinct, and even if they were, as stated in § 803 of the M.P.E.P. "[i]f the search and examination of the entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions." (M.P.E.P. § 803, emphasis added). Since the search has already been conducted by the International Search Authority and the International Examination Authority and no lack of unity of invention has been found, there would appear to be no undue burden on the Examiner to examine the entire application.

In the alternative, Applicants respectfully request that the restriction requirement for Groups I, II and III be reconsidered and withdrawn for the same reasons as explained above.

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Conclusion

For the above reasons, Applicants respectfully request that the restriction requirement be reconsidered and withdrawn.

This response is filed within one month of the mailing of the Office Communication, thus Applicants do not believe that any fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 12810-00046-US from which the undersigned is authorized to draw.

Respectfully submitted,

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